



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2014-0105; Directorate Identifier 2008-SW-58-AD]

RIN 2120-AA64

Airworthiness Directives; Airbus Helicopters (Previously Eurocopter France)

(Airbus Helicopters) Helicopters

AGENCY: Federal Aviation Administration, DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This document proposes superseding Airworthiness Directives (AD)

2000-05-17 and AD 2001-04-12, which apply to Eurocopter France (now Airbus Helicopters) Model EC120B helicopters. AD 2000-05-17 and AD 2001-04-12 require repetitive visual checks of the engine-to-main gearbox (MGB) coupling tube assembly (coupling tube) for a crack and replacing any cracked tube with an airworthy tube. This proposed AD would require removing certain engine mount parts from service, measuring the height of the engine mounting base for certain helicopters, replacing the engine mount if a certain height is exceeded, inspecting the flared coupling on certain helicopters for a crack, and replacing the coupling if it is cracked. Since we issued AD 2000-05-17 and AD 2001-04-12, there have been reports of additional cracks in coupling

tubes. The proposed actions are intended to prevent coupling tube failure, loss of engine drive, and a subsequent forced landing of the helicopter.

DATES: We must receive comments on this proposed AD by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments by any of the following methods:

- Federal eRulemaking Docket: Go to <http://www.regulations.gov>. Follow the online instructions for sending your comments electronically.

- Fax: 202-493-2251.

- Mail: Send comments to the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590-0001.

- Hand Delivery: Deliver to the “Mail” address between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> or in person at the Docket Operations Office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the Direction Generale de L’Aviation Civile (DGAC) AD, the economic evaluation, any comments received and other information. The street address for the Docket Operations Office (telephone 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

For service information identified in this proposed AD, contact Airbus Helicopters, Inc., 2701 N. Forum Drive, Grand Prairie, Texas 75052; telephone (972) 641-0000 or

(800) 232-0323; fax (972) 641-3775; or at <http://www.airbushelicopters.com/techpub>.

You may review the service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137.

FOR FURTHER INFORMATION CONTACT: James Blyn, Aviation Safety Engineer, Regulations and Policy Group, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5110; email james.blyn@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to participate in this rulemaking by submitting written comments, data, or views. We also invite comments relating to the economic, environmental, energy, or federalism impacts that might result from adopting the proposals in this document. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. To ensure the docket does not contain duplicate comments, commenters should send only one copy of written comments, or if comments are filed electronically, commenters should submit only one time.

We will file in the docket all comments that we receive, as well as a report summarizing each substantive public contact with FAA personnel concerning this proposed rulemaking. Before acting on this proposal, we will consider all comments we receive on or before the closing date for comments. We will consider comments filed after the comment period has closed if it is possible to do so without incurring expense or delay. We may change this proposal in light of the comments we receive.

Discussion

On March 6, 2000, we issued AD 2000-05-17, Amendment 39-11627 (65 FR 13875, March 15, 2000) for Model EC120B helicopters with engine coupling tube, part number (P/N) C631A1002101, installed. AD 2000-05-17 requires recurring inspections of each coupling tube for a crack and, if there is a crack, replacing any cracked coupling tube with an airworthy, reinforced coupling tube, P/N C631A1101101, and replacing certain engine support fitting parts. AD 2000-05-17 also requires replacing all affected coupling tubes with a reinforced coupling tube and replacing certain engine support fitting parts by March 31, 2000. AD 2000-05-17 was prompted by reports of cracks on the coupling tubes.

On February 20, 2001, we issued AD 2001-04-12, Amendment 39-12131 (66 FR 13232, March 5, 2001), for Model EC120B helicopters with engine coupling tube, P/N C631A1101101, installed. AD 2001-04-12 requires a visual check on each coupling tube for a crack at specified intervals. AD 2001-04-12 was prompted by several reports of cracks on the reinforced coupling tube.

AD 2000-05-17 and AD 2001-04-12 were intended to prevent coupling tube failure, loss of engine drive, and a subsequent forced landing.

Actions Since AD 2000-05-17 and AD 2001-04-12 Were Issued

Since we issued AD 2000-05-17 (65 FR 13875, March 15, 2000) and AD 2001-04-12 (66 FR 13232, March 5, 2001), there have been reports of additional cracks in coupling tubes. Eurocopter France (now Airbus Helicopters) has conducted tests and determined that the washer-type engine mount may, in certain cases, induce excessive loading on the coupling tube since the design does not allow the operators to ensure that

all of the parts are correctly assembled. Eurocopter France (now Airbus Helicopters) has also determined that excessive loading results in binding that increases component wear of the inner diameter of the mounting base.

The DGAC, on behalf of the European Aviation Safety Agency, issued AD No. F-2003-325 R1, dated May 12, 2004, to correct an unsafe condition for Model EC120B helicopters with engine coupling tube, P/N C631A1101101, and with an engine mount containing certain parts listed in Eurocopter Alert Service Bulletin (ASB) No. 04A005, dated July 16, 2003. DGAC AD No. F-2003-325 R1 requires certain inspections for helicopters with an engine mount block modified in accordance with Eurocopter Service Bulletin (SB) No. 71-003, Revision 1, dated July 18, 2002, replacing any coupling tube that has a crack, and increasing the life limit of the coupling tube from 1,000 flight hours to 20,000 flight hours. Also, DGAC AD No. F-2003-325 R1 requires, for helicopters with a new spring-loaded engine suspension modification in accordance with Eurocopter SB No. 71-005, Revision 0, dated May 14, 2004, increasing the life limit of the coupling tube to 20,000 flight hours and canceling the repetitive inspections of the coupling tube. The DGAC advises that a crack was detected on a reinforced coupling tube, which may lead to coupling tube failure and subsequent autorotation.

This action is intended to prevent coupling tube failure, loss of engine drive, and a subsequent forced landing of the helicopter.

FAA's Determination

This helicopter has been approved by the aviation authority of France and is approved for operation in the United States. Pursuant to our bilateral agreement with France, the DGAC has kept the FAA informed of the situation described above. We are

proposing this AD because we evaluated all information provided by the DGAC and determined the unsafe condition exists and is likely to exist or develop on other helicopters of these same type designs.

Related Service Information under 1 CFR part 51

We reviewed the following Eurocopter service information:

- ASB No. 04A005, Revision 0, dated July 16, 2003, prohibits, after June 30, 2004, operating an engine mount made up of the following parts: support arm, P/N C714A1107201; swaged support arm, P/N C714A1106201; left-hand support bracket, P/N C714A1101102; and right-hand support bracket, P/N C714A1101103. SB No. 04A005 also specifies measuring the height of the engine mounting base and, if the height is more than 10.5 millimeters, replacing the engine mount with an engine mount that does not have the specified P/N. ASB No. 04A005 does not apply to helicopters modified with an improved engine mount in accordance with SB No. 71-003. ASB No. 04A005 also does not apply to helicopters with a serial number 1170 or larger, as the specified engine mounts are not installed on those helicopters.
- SB No. 71-005, Revision 0, dated May 14, 2004, contains procedures to modify the spring-type engine suspension system and dye-penetrant inspect the flared coupling assembly.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section of this NPRM.

The DGAC classified the service information contained in ASB No. 04A005 and SB No. 71-005 as mandatory and issued AD No. F-2003-325 R1, dated May 12, 2004, to

ensure the continued airworthiness of these helicopters.

Other Related Service Information

We also reviewed the following Eurocopter service information:

- SB No. 71-003, Revision 1, dated July 18, 2002, contains procedures to improve the engine mount.

- ASB No. 05A003, Revision 2, dated July 16, 2003, for helicopters that have not been modified with an improved engine mount in accordance with SB No. 71-003, specifies inspecting the coupling tube for a crack every 5 hours and establishing a coupling tube life limit of 1,000 hours. For helicopters that have been modified with an improved engine mount, ASB No. 05A003 specifies inspecting the coupling tube for a crack every 25 hours and increasing the coupling tube life limit to 20,000 hours. ASB No. 05A003 was revised to Revision 3, dated May 11, 2004, to specify an optional spring-type engine suspension modification and cancel the repetitive inspection for this modified configuration.

The DGAC also classified the service information contained in SB No. 71-003 and ASB No. 05A003 as mandatory and issued AD No. F-2003-325 R1, dated May 12, 2004, to ensure the continued airworthiness of these helicopters.

Proposed AD Requirements

This proposed AD would require:

- Before further flight, for certain helicopters, removing from service certain engine mount parts: support arm, P/N C714A1107201; swaged support arm, P/N C714A1106201; left-hand support bracket, P/N C714A1101102; and right-hand support bracket, P/N C714A1101103. Measuring the height of the engine mounting base and, if

the height is more than 10.5 millimeters, replacing the engine mount with an engine mount that does not have the affected parts.

- Within 25 hours time-in-service (TIS), for certain other helicopters that do not have the specified engine mount parts due to modifications, replacing the spring-type engine suspension system and dye-penetrant inspecting the flared coupling for a crack. If there is a crack in the flared coupling, before further flight, replacing the coupling with an airworthy coupling.

- Before further flight, removing coupling tube, P/N C631A1002101 from service. This proposed AD would prohibit installing coupling tube, P/N C631A1002101 on any helicopter.

Differences Between This Proposed AD and the DGAC AD

This proposed AD would require the installation of the spring-type engine suspension modification specified in Eurocopter SB No. 71-005 and would not require the repetitive inspection of the coupling tube and the engine mount base. This proposed AD would not require you to contact the manufacturer.

Costs of Compliance

We estimate out of 115 helicopters on the U.S. registry about 23 helicopters would be affected by this proposed AD. At an average labor rate of \$85 per work hour, we estimate the following:

- Installing new mounting arms and brackets would require about 12 work hours and required parts would cost \$9,194, for a total cost per helicopter of \$10,214 and \$234,922 for the fleet.

- Installing the mounting spring kit would require about 14 work hours and

required parts would cost \$14,621, for a total cost per helicopter of \$15,811 and \$363,653 for the fleet.

- Dye-penetrant inspecting the coupling tube would require about 1 work hour for a cost per helicopter of \$85 and \$1,955 for the fleet.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA’s authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. “Subtitle VII: Aviation Programs,” describes in more detail the scope of the Agency’s authority.

We are issuing this rulemaking under the authority described in “Subtitle VII, Part A, Subpart III, Section 44701: General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed, I certify this proposed regulation:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction; and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared an economic evaluation of the estimated costs to comply with this proposed AD and placed it in the AD docket.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by:
 - a. Removing Airworthiness Directive (AD) 2000-05-17, Amendment 39-11627 (65 FR 13875, March 15, 2000); and AD 2001-04-12, Amendment 39-12131 (66 FR 13232, March 5, 2001); and
 - b. Adding the following new AD:

Airbus Helicopters (Previously Eurocopter France): Docket No. FAA-2014-0105;
Directorate Identifier 2008-SW-58-AD.

(a) Applicability

This AD applies to Model EC120B helicopters with an engine-to-main gearbox coupling tube assembly (coupling tube), part number (P/N) C631A1101101 or P/N C631A1002101, installed, certificated in any category.

(b) Unsafe Condition

This AD defines the unsafe condition as a crack in a coupling tube. This condition could result in coupling tube failure, loss of engine drive, and a subsequent forced landing of the helicopter.

(c) Affected ADs

This AD supersedes AD 2000-05-17, Amendment 39-11627 (65 FR 13875, March 15, 2000) and AD 2001-04-12, Amendment 39-12131 (66 FR 13232, March 5, 2001).

(d) Comments Due Date

We must receive comments by [insert date 60 days after date of publication in the **Federal Register**].

(e) Compliance

You are responsible for performing each action required by this AD within the specified compliance time unless it has already been accomplished prior to that time.

(f) Required Actions

(1) For helicopters with a serial number up to and including 1169, not modified with an improvement of the engine mount in accordance with Eurocopter Service Bulletin (SB) No. 71-003, Revision 1, dated July 18, 2002 (SB 71-003), or not modified

by installing a spring-type engine suspension system in accordance with Eurocopter SB No. 71-005, Revision 0, dated May 14, 2004 (SB 71-005), before further flight:

(i) Remove from service the following engine mount parts:

(A) Support arm, P/N C714A1107201;

(B) Swaged support arm, P/N C714A1106201;

(C) Left-hand support bracket, P/N C714A1101102; and

(D) Right-hand support bracket, P/N C714A1101103.

(ii) Measure the height of the engine mounting base as depicted in Figure 1 of Eurocopter Alert SB No. 04A005, Revision 0, dated July 16, 2003. If the height is more than 10.5 millimeters, replace the engine mount with an engine mount that does not have the parts identified in paragraph (f)(1)(i) of this AD.

(2) For helicopters with a serial number 1170 and larger or helicopters modified with an improvement of the engine mount in accordance with SB 71-003:

(i) Within 25 hours TIS, replace the spring-type engine suspension system and perform a dye-penetrant inspection of the flared coupling for a crack by following the Accomplishment Instructions, paragraphs 2.B.2.a through 2.B.2.c of SB 71-005.

(ii) If there is a crack in the flared coupling, before further flight, replace the coupling with an airworthy coupling.

(3) For helicopters with coupling tube, P/N C631A1002101, installed, before further flight, remove coupling tube, P/N C631A1002101, from service. Do not install coupling tube, P/N C631A1002101, on any helicopter.

(g) Special Flight Permits

Special flight permits may be issued provided there are no cracks in the coupling tube attachment fitting.

(h) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Safety Management Group, FAA, may approve AMOCs for this AD. Send your proposal to: James Blyn, Aviation Safety Engineer, Regulations and Policy Group, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5110; email james.blyn@faa.gov.

(2) For operations conducted under a 14 CFR part 119 operating certificate or under 14 CFR part 91, subpart K, we suggest that you notify your principal inspector, or lacking a principal inspector, the manager of the local flight standards district office or certificate holding district office before operating any aircraft complying with this AD through an AMOC.

(i) Additional Information

(1) Eurocopter Alert Service Bulletin (ASB) No. 05A003, Revision 2, dated July 16, 2003, Eurocopter ASB No. 05A003, Revision 3, dated May 11, 2004, and Eurocopter Service Bulletin No. 71-003, Revision 1, dated July 18, 2002, which are not incorporated by reference, contain additional information about the subject of this AD. For service information identified in this AD, contact Airbus Helicopters, Inc., 2701 N. Forum Drive, Grand Prairie, Texas 75052, telephone (972) 641-0000 or (800) 232-0323; fax (972) 641-3775; or at <http://www.airbushelicopters.com/techpub>. You may review a copy of the service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137.

(2) The subject of this AD is addressed in Direction Generale de L'Aviation Civile (DGAC) AD No. F-2003-325 R1, Revision A, dated May 12, 2004. You may view the DGAC AD on the Internet at <http://www.regulations.gov> in Docket No. FAA-2014-0105.

(j) Subject

Joint Aircraft Service Component (JASC) Code: 6310 Engine/Transmission
Coupling – Coupling Tube, Engine Mount, and Engine Mount Base.

Issued in Fort Worth, Texas, on May 29, 2015.

Lance T. Gant,

Acting Directorate Manager, Rotorcraft Directorate,
Aircraft Certification Service.

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